

ABSTRACT

A cordless telephone implementing using a BLUETOOTH wireless bearer is presented. A BLUETOOTH voice data structure is implemented by coding the voice data at a bitrate below 64 kb/s, such that the full number of payload bits provided by the BLUETOOTH voice data structure are not required for transmission of voice data. The packet payload is then encoded in a non-standard format to implement a robust error detection and/or correction protocol for the voice data, as well as for the provision of a low-rate data channel for transmission of information such as caller ID. Alternatively, a BLUETOOTH non-voice data structure can be employed by transmitting encoded voice data as user payload bits. The data link is then flushed each time new voice data is ready for sending by the transmitting device. If slots are available before the data link is flushed, unsuccessfully transmitted data can be automatically resent, thereby implementing time and frequency diversity.